

# A B S T R A C T

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A method for modifying a wild strain of an entero-  
invasive Shigella to produce a modified strain of  
Shigella that can be used for making a vaccine against  
the wild strain of Shigella. The genome of the wild  
10 strain of Shigella is transformed so that it cannot  
substantially invade cells of a human host and cannot  
spread substantially within infected cells and from  
infected to uninfected cells of the host and cannot  
produce toxins which will kill substantial numbers of the  
15 host's infected, as well as uninfected, cells. A first  
gene of the wild strain of Shigella, coding for a protein  
necessary for the Shigella to invade cells of the host,  
and a second gene, coding for a protein necessary for the  
Shigella to spread within infected cells and between the  
20 infected and uninfected cells of the host, are  
mutagenized.

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